

*Application No. 10/500,182*

AMENDMENTS TO THE DRAWINGS

Please replace Figs. 14-16 with the attached "Replacement Sheets" that properly label Figs. 14-16 as "PRIOR ART."

REMARKS/ARGUMENTS

Applicant submits this Amendment and Response to respond to the Office Action dated September 13, 2005. Claims 2 and 5 have been amended and Claims 1, 3, and 4 were previously canceled without intending to abandon or to dedicated to the public any patentable subject matter. Accordingly, Claims 2 and 5 are now pending.

As set forth above, the abstract has been amended to include between 50 and 150 words. Additionally, replacement sheets have been provided that correctly label Figs. 14-16 as "Prior Art". Furthermore, the drawings stand objected to under 37 CFR §1.83(a) for failing to show every feature of the invention specified in the claims. Applicant respectfully disagrees with the Examiner's holding that "the diameter of said piezoelectric ceramic is almost identical to that of said dome part" is not shown in any of the figures. Namely, a piezoelectric ceramic corresponds to a member numbered "1a" and a dome part corresponds to a member numbered "3" in Fig. 1. Applicant believes that the present Fig. 1 properly shows the diameter of the piezoelectric ceramic to be nearly equal to that of the dome part.

Claims 2 and 5 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 2 and 5 have been amended to ensure proper antecedent basis for the claims given. Accordingly, reconsideration and withdrawal of the rejections of Claims 2 and 5 are respectfully requested.

Claims 2 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,386,241 to Maeda ("Maeda"). In order for an obviousness rejection under U.S.C. §103 to be proper, the prior art reference must teach or suggest all of the claim limitations. However, all of the claim limitations set forth in the pending claims cannot be found in Maeda and would not have been obvious in view of Maeda to one of skill in the art at the time the application was filed. Accordingly, reconsideration and withdrawal of the rejections of the claims are respectfully requested.

As amended, Claims 2 and 5 each recite a "voltage boosting circuit." Support for the amendments can be found, for example, at page 18, line 10 to page 19, line 14; and at page 41, lines 14-20. Maeda does not teach, suggest, or describe a voltage boosting circuit as recited by

Claims 2 and 5. Accordingly, reconsideration and withdrawal of the rejections of Claims 2 and 5 are respectfully requested.

The claimed invention provides an inexpensive speaker for reproducing ultrahigh frequencies. The speaker has superior sound pressure frequency response wherein the peak/dip is small and the upper cut-off frequency exceeds 100 kHz. The speaker further displays high sound pressure level and an excellent directional pattern. In order to achieve these characteristics, especially to get the high sound pressure level in the ultrahigh frequencies, a voltage boosting circuit can be used. Namely, the diameter of the dome-shaped diaphragm is made smaller in order to obtain the excellent directional pattern in the reproduction of the ultrahigh frequencies. Thus, without a voltage boosting circuit, only a lower sound pressure level could be obtained.

The object of Maeda is to provide an ultra thin piezoelectric loudspeaker that is suitable for use in a portable miniature radio. Maeda does not teach, suggest, or describe the reproduction of ultrahigh frequencies. Because of this, Maeda does not teach, suggest, or describe using a voltage boosting circuit. Therefore, the excellent directional pattern in the reproduction of the ultrahigh frequencies cannot be obtained in Maeda. Furthermore, in Maeda, there is no description regarding the resonance frequency at high frequencies of the diaphragm. Thus, in Maeda, even if the dome-shaped diaphragm is attached to the cylindrical coupling member, the speaker of Maeda could not reproduce the ultrahigh frequencies except for a case where the resonance frequency is high at high frequencies of the diaphragm.

Therefore, for at least these reasons, Claims 2 and 5 are not obvious in view of Maeda, and the rejections of these claims should be reconsidered and withdrawn.

*Application No. 10/500,182*

Based upon the foregoing, Applicant believes that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

SHERIDAN ROSS P.C.

By: \_\_\_\_\_

Matthew R. Ellsworth  
Registration No. 56,345  
1560 Broadway, Suite 1200  
Denver, Colorado 80202-5141  
(303) 863-9700

Date: 12-13-05